Performance Measure Profile

Serious Runway Incursion Rate

FY 2013 Methodology Report

Federal Aviation Administration

Performance Measure Applicability	
☒ **DOT Strategic Plan** Goal: Safety Outcome: Reduction in transportation-related fatalities and injuries. Metric: Reduce category A&B runway incursions in all airports to a rate of no more than 0.395 per million operations in FY 2013. ☒ **Agency Priority Goal**	☒ **Destination 2025** Goal: Move to the Next Level of Safety Outcome: Reduce the risk of runway incursions. Metric: Reduce Category A & B (most serious) runway incursions to a rate of no more than .395 per million operations, and maintain or improve through FY 2013

FY 2013 Performance Target

Reduce Category A & B (most serious) runway incursions to a rate of no more than .395 per million operations, and maintain or improve through FY 2013.

Lead Organization: Air Traffic Organization (ATO)

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Target	0.472	0.450	0.450	0.395	0.395
Actual	0.227	0.117	0.138	0.356	TBD

Definition of Metric

Metric Unit:	Rate of Category A & B (most serious) runway incursions per million operations.
Computation:	The total number of Category A and B runway incursions is divided by the sum of the number operations divided by 1 million.
Formula:	$\frac{\text{Number of A \& B Incursions}}{(\text{Operations Count}/1{,}000{,}000)}$
Scope of Metric:	A runway incursion is any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and takeoff of aircraft. They are grouped in three general categories: air traffic, pilot, or vehicle/pedestrian events. Runway incursions are reported and tracked at airports that have an operational air traffic control tower. Operations are defined as total takeoffs and landings. The FAA tracks four categories of runway incursions - A, B, C, D - but includes only those with the highest risk of collision, Category A and B incursions, in the measure. ▪ Category A: Separation decreases to the point that participants take extreme action to narrowly avoid a collision. ▪ Category B: Separation decreases, and there is a significant potential for a collision. ▪ Category C: Separation decreases, but there is ample time and distance to avoid a collision. ▪ Category D: There is little or no chance of collision, but the definition of a runway incursion is met.

	In FY 2002 FAA changed the focus of measurement for runway incursions from all incursions to those incursions with measurable risk of collision, Categories A and B. Since Category C and D incursions were not likely to lead to an accident or a significant risk of an accident, their inclusion in the previous total tended to mask true safety risk. The new measure reflects the focus of FAA's runway safety effort to reduce the rate of the incursions with demonstrable risk.
Method of Setting Target:	This target was set based on past history and long term trends of the rate of serious runway incursion events.

Why the FAA and/or DOT Choose this Metric

Runway incursions create dangerous situations that can lead to serious accidents. Reducing the number of runway incursions lessens the probability of accidents that potentially involve fatalities, injuries, and significant property damage.

Public Benefit

Reduced probability that the public will be injured or killed in an accident resulting from a runway incursion.

Partners

The FAA Co-Chairs the Runway Safety Council with Airlines For America (A4A). Other Council members include National Air Traffic Controllers Association, the Air Line Pilots Association, Aircraft Owners and Pilots Association, National Association of Flight Instructors, National Business Aviation Association, Regional Airline Association, National Air Traffic Controllers Association, Airport Councils International-North America, and the American Association of Airport Executives.

External Factors Affecting Performance

Runway incursions are the result of an air traffic controller, pilot, or vehicle/pedestrian event. The FAA has direct influence on air traffic controller performance, but indirect influence on pilots and airport personnel.

Source of the Data

Air traffic controllers and pilots are the primary source of runway incursion reports. The data are recorded in the Comprehensive Electronic Data Analysis Reporting (CEDAR) system. CEDAR replaced the FAA Air Traffic Quality Assurance (ATQA) database. Preliminary incident reports are evaluated when received and evaluation can take up to 90 days.

Operations data used to calculate the runway incursion rate are provided via OPSNET, and is downloaded directly from the FAA Operations and Performance Data database.

Statistical Issues

None.

Completeness

The data are typically not finalized for 90 days following the close of the fiscal year. Surface event reports are reviewed on a daily basis to determine if the incident meets the definition of a runway incursion. Runway incursions are a subset of the incident data collected and the completeness of the data is based on the reporting requirements and completeness for each of the incident types.

If the operations data are not up to date, these calculations must be revised. The rate may also need to be recalculated if runway incursions are reported late. Historical volume data have been changed over the last three years, resulting in adjustments to current baselines.

Reliability

FAA uses performance data and information collected through a defined, repeatable risk analysis process for program management, personnel evaluation, and accountability in prioritizing its facility audits and assessments. The FAA verifies and validates the accuracy of the data through the initial validation process followed by quality assurance and quality control reviews. Reconciliation of the databases is conducted monthly and anomalies are explored and resolved. In cases where major problems are identified, a request to re-submit is issued. The FAA conducts annual reviews of reported data and compares them with data reported from previous years. Annual runway incursion incident data are used to provide a statistical basis

for research and analysis and outreach initiatives.